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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,878

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Marcel Johannes Maria Bucks

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05/13/2004

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EXAMINER

NGUYEN, HIEP

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/614,878

Applicant(s)

BUCKS ET AL.

Examiner

Hiep Nguyen

Art Unit

2816



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

The disclosure is objected to because of the following informalities: the disclosure “Operation in the critical **discontinuous mode**...each period of the control signal: in page 1 lines 14-16” is not relevant. According to figure 1 of the presentation, a current will flow through inductor (L) all the time.

Appropriate correction is required.

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the recitation “a transformer” in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The recitation “...conductive and non-conductive at a high frequency to thereby operate the DC-DC- converter in the **critical discontinuous mode** and equipped with circuitry for...” in claim 1 that is disclosed on the specification, page 1, is indefinite because according to figure 1 of the present application,

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the input signal is a DC signal thus, there will be a current flowing through the inductive element (L) whether switch (Q1) closes or opens. Claims 2-10 are indefinite because of the technical deficiencies of claim 1.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Vinciarelli (US Pat. 4,648,020).

Regarding claim 1, figures 2, 4, 5 show a circuit arrangement for supplying an LED array comprising:

input terminals for connection to a voltage supply source;

output terminals;

a DC-DC-converter (L1, L2, 42', 46' and the switch controlled by the switch controller 30) coupled between the input terminals and the output terminals, the DC-DC-converter comprising:

an inductive element (L2);

a unidirectional element (42);

a switching element coupled to the inductive element (L2) and the unidirectional element, and

a control circuit (30) coupled to a control electrode of the switching element for generating a high frequency control signal for rendering the switching element conductive and non-conductive at a high frequency to thereby operate the DC-DC converter in the critical discontinuous mode and equipped with circuitry (24) for controlling the current through the output terminals at a predetermined value, the circuitry for controlling the current through the output terminals comprising:

a circuit coupled to the input terminals and the output terminals for controlling

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a time lapse  $T_{on}$  (24), during which the switching element is maintained in a conductive state during each high frequency period of the control signal, proportional to a mathematical expression that is a function of  $V_{in}$  and  $V_{out}$ , wherein  $V_{in}$  is the voltage present between the input terminals and  $V_{out}$  is the voltage present between the output terminals. Note that the recitation "the LED array" is merely an intended use thus, it has no patentable weight. Figure 4 shows that the DC-DC of Vinciarelli operates in the "critical continuous mode" and because circuit (24) is coupled between the inputs and outputs of the DC-DC converter, the frequency period of the control signal is a function of the input/output voltages.

### *Allowable Subject Matter*

Claims 2010 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

05-06-04



TUANT.LAM  
PRIMARY EXAMINER